

Montana Department of Natural Resources and Conservation  
Water Resources Division  
Water Rights Bureau

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

1. Applicant/Contact name and address: BIG HORN CONSERVATION DISTRICT  
724 WEST 3<sup>RD</sup> ST.  
HARDIN, MT 59034
2. Type of action: Conservation District Change Application 43P 30114064
3. Water source name: Bighorn River
4. Location affected by project: Section 29, T1S, R33E, Big Horn County
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The applicant proposes to authorize the producer (Miles and Lora Torske) to use 1.3 CFS up to 504 AF/year of the Big Horn Conservation District water reservation. The water would be used to irrigate 140 acres in NW and W2W2NE Sec. 29 T1S, R33E, Big Horn County. The irrigation would use center pivot sprinklers. The benefit would be to allow the Conservation District to fulfill its obligation to provide water for future irrigation projects. The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.
6. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)  
  
United States Department of Agriculture Natural Resources Conservation Service  
Montana Natural Heritage Program  
United State Fish and Wildlife Service  
Montana Department of Fish, Wildlife and Parks  
Montana Department of Environmental Quality

**Part II. Environmental Review**

**1. Environmental Impact Checklist:**

**PHYSICAL ENVIRONMENT**

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

*Determination:* No significant impact.

This stretch of the Bighorn River between the Afterbay Dam and the confluence with the Little Bighorn River is considered a periodically dewatered stream by the Montana Department of Fish, Wildlife and Parks. The proposed use will have little effect on the dewatering because it appropriates water only during times of relatively high flow.

**Water quality** - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

*Determination:* No significant impact.

This stretch of the Bighorn River is listed as fully supporting agriculture but not supporting drinking water due to lead and mercury levels from unknown sources. This application is for agricultural use and would not degrade the water quality in terms of metal concentrations. This project will use high efficiency center pivot sprinklers. High efficiency projects decrease the potential for degradation of water quality, because there is little to no return flow.

**Groundwater** - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

*Determination:* No impact

The project uses surface water for irrigation and will not adversely affect groundwater.

**DIVERSION WORKS** - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

*Determination:* No significant impact.

The diversion works will take water from a canal system after diversion from the river eliminating impact to the river itself. The primary diversion is in place and operating. The project includes no dams or wells and riparian areas are removed from the secondary diversion.

## **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."

*Determination:* No significant impact.

The Montana Natural Heritage Program website lists the Black-tailed Prairie Dog, Merriam's Shrew, Preble's Shrew, Spiny Softshell and Sauger as species of concern. There are no threatened or endangered species in the area. No plant species of concern are listed.

**Wetlands** - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

*Determination:* No significant impact.

The proposed project will take no water from recognized wetlands and is located several miles across a major irrigation canal and road from riparian areas.

**Ponds** - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

*Determination:* Not applicable.

There are no ponds involved in this proposal.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

*Determination:* Possible Impact

The dominant soils in the area are Keiser Silty clay loam, Hydro-Gilt Edge complex and Shonkin clay loam. The Keiser and Hydro-Gilt Edge soils are deep, well drained soils suitable for agriculture. The Hydro-Gilt Edge complex is not prime farmland and is moderately saline to strongly saline. The Shonkin clay loam is poorly drained, very slightly to slightly saline and not prime farmland. The use of center pivot irrigation on these soils could cause some saline seep.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

*Determination:* No significant impact.

The area of this project has been used for agriculture in the past and has no native vegetative cover. The area is currently served by several roads and surrounds an active dwelling. Installation of the sprinkler systems, pipes and pumps may provide an opportunity for spread of weeds. It will be the responsibility of the property owner to monitor and control weeds.

**AIR QUALITY** - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

*Determination:* No impact.

The project is for sprinkler irrigation of agricultural land and will not impact air quality.

**HISTORICAL AND ARCHEOLOGICAL SITES** - Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.

*Determination:* Not applicable

The project is not located on State or Federal Lands.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - Assess any other impacts on environmental resources of land, water and energy not already addressed.

*Determination:* None recognized.

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

*Determination:* There are no known locally adopted environmental plans or goals.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

*Determination:* No impact.

The area is surrounded by roads and has been historically used for agriculture. There are no nearby recreational or wilderness areas.

**HUMAN HEALTH** - Assess whether the proposed project impacts on human health.

*Determination:* No impact

The project is for sprinkler irrigation of agricultural land.

**PRIVATE PROPERTY** - Assess whether there are any government regulatory impacts on private property rights.

Yes\_\_\_ No\_\_**X**\_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

*Determination:* Not applicable.

**OTHER HUMAN ENVIRONMENTAL ISSUES** - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

*Impacts on:*

- (a) Cultural uniqueness and diversity? No significant impact.
- (b) Local and state tax base and tax revenues? No significant impact.
- (c) Existing land uses? No significant impact.
- (d) Quantity and distribution of employment? No significant impact.
- (e) Distribution and density of population and housing? No significant impact.
- (f) Demands for government services? No significant impact.

(g) Industrial and commercial activity? No significant impact.

(h) Utilities? No significant impact.

(i) Transportation? No significant impact.

(j) Safety? No significant impact.

(k) Other appropriate social and economic circumstances? No significant impact.

**2. *Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: No secondary impacts of this project were recognized.

Cumulative Impacts: There is one other pending application in this area. This project does not appear to pose any cumulative adverse impacts.

**3. *Describe any mitigation/stipulation measures:*** None

**4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** The only alternative to the project as proposed is a no action alternative. The no action alternative would have no impacts. However, the no action alternative denies the conservation district and the producer the benefit of irrigation.

***PART III. Conclusion***

**1. *Preferred Alternative:*** Issue a change authorization if applicant proves the criteria in 85.2.402 MCA are met.

**2. *Comments and Responses:*** None

**3. *Finding:***  
Yes\_\_\_ No X *Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:* No significant adverse impacts associated with the project were identified. Therefore, an EA is the appropriate level of investigation and an EIS is not required.

*Name of person(s) responsible for preparation of EA:*

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Title: Water Resource Specialist  
Date: 12/11/2017